

INTERNATIONAL COMPARISON; SERVICES COVERED UNDER ALLOWED CHARGES

PUBLIC UTILITIES COMMISSION OF SRI LANKA

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This report contains a comparison of international practices on cost recovery of the services covered under “Allowed Charges” pertaining to electricity distribution business.

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BACKGROUND

The Public Utilities Commission of Sri Lanka (the Commission) is the economic, technical and safety regulator of the electricity industry in Sri Lanka. The Commission is entrusted with the function to collect and record information relating to the electricity industry of the country.

The long term goals for electricity sector of Sri Lanka published by the Commission consist of a set of long – term goals, one of which being “Charges levied by service provider in 2014 is reduced by 10% in real terms by 2020”, (goal number 8).

The methodology to determine allowed charges was approved by the Public Utilities Commission in September 2010. After that the licensees were directed to follow that methodology and since then they have been practicing it. During last few years the Commission could learn that there is a possibility to introduce improvements to some of the areas of the methodology. Accordingly the Commission included this study as a deliverable of the Annual Activity Plan 2016.

INTRODUCTION

The objective of this activity is to identify the internationally accepted methods with respect to determination of allowed charges and thereby to identify the potential improvable areas to the allowed charges methodology which is currently being followed in Sri Lanka.

Given below is the list of services which are regulated by the approved methodology for charges.

1. Disconnection at the customer's request
2. Reconnection after a disconnection at the customer's request
3. Reconnection after a statutory disconnection
4. Testing of an energy or energy/demand meter
5. Installation testing
6. Changing an account name and/or the tariff category
7. Changing an energy or energy/demand meter
8. Provision of a new electricity supply
9. Provision of a temporary electricity supply
10. Augmentation of an existing electricity supply
11. Shifting of poles/lines/transformers/any other electrical plant
12. Clearing of Way Leaves
13. Issuing a Clearance Report
14. Issuing a Duplicate Bill
15. Provision of a net metering facility
16. Interconnection of an Embedded Generation facility
17. Grid Interconnection of a Generation facility

From these services a set of services were identified to be studied further. The international practices related to determination of charges of these services were studied. The identified list of services is given below.

1. Provision of a new retail electricity supply
2. Provision of a new bulk electricity supply
3. Testing of an energy or energy/demand meter
4. Disconnection of the supply at the customer's request
5. Reconnection of the supply after a disconnection at the customer's request
6. Provision of a temporary electricity supply
7. Shifting of poles/lines/transformers/any other electrical plant
8. Provision of a Net metering connection

Collection of Information

Even though Sri Lanka has a comprehensive methodology for charges, it was impossible to find such methodology for charges published by any other electricity regulator, through web browsing. Therefore collection of information to carry out this task was done through following ways.

1. Through web sites and publications of the electricity regulatory bodies in other countries.
2. Through a questionnaire circulated among foreign officers/personnel who are attached to electricity regulatory bodies, using personal contacts. (The respective questionnaire template and received completed questionnaires are attached as ANNEX 1 and ANNEX 2.)

Principles of Calculation of Costs/Charges

Section 6 of the approved methodology for charges stipulates a set of principles to determine charges. Given below are some of the basic principles mentioned in the methodology.

1. Basis for the estimate

Estimates for services mentioned in the methodology should be prepared by the Licensee to recover all reasonable expenses that would be incurred in providing such services. The formulae mentioned in the methodology to determine the charges does not allow the licensees to make any profit.

2. Job costs

All jobs undertaken by the Licensee should be carried out in accordance with the specifications and standards laid down in the Codes of Practices issued under the Act. Total man-hours required for a job should include direct labor requirements and supervisory inputs assuming 8 hour working day and 22 working days per month.

3. Overheads and administrative costs

Until such time the Commission is satisfied that all overheads and administration costs are recovered through electricity tariffs, the Commission should allow Licensees to recover up to 5% of the total cost of the estimate as the overhead and administrative costs. The Commission should inform all the Licensees by 1st of November each year, the percentage applicable for the recovery of overheads.

4. Transport costs

Licensees should recover the transport costs as applicable. Depending on the jobs, transport costs will include material/equipment transportation or transportation of personnel.

In general the licensee is expected to recover all the costs incurred while supplying a service through the charges. However the licensee is not expected to keep any profit margin.

INTERNATIONAL PRACTICES IN DETERMINING CHARGES

Information Found by publications and websites of Regulatory bodies.

The websites of electricity regulatory bodies / distribution companies give information on their practices on determining charges for the services provided by the distribution companies. However, finding the methodologies of determining service charges for all the services mentioned in Allowed Charges methodology of Sri Lanka was not possible. Therefore browsing web could partly satisfy the requirement of the study. Given below is a list of findings taken through web sites. (Respective sources of information are given along with the facts.)

1. **Source: “Answers to Questions about Your Electric Service”, American Electric Power – Ohio (Revised in 2012)**

a. Charge for electric service for a new construction

- The new customer may be responsible for some or all of the costs of any new facilities installed for the sole benefit of the customer.

Comment: It seems that the charge is determined by a case by case estimate. The customer has to pay fully or partly for the installations which are installed for the sole benefit of the customer. However the criteria to decide whether to pay fully or party, is not clear.

b. Remodeling or relocating existing electric service

- The customers are responsible for some or all of the cost of any dedicated facilities, service modifications or meter installations, made at the customer’s request, for the customer’s sole benefit.

Comment: It seems that the charge is determined by a case by case estimate. The customer has to pay fully or partly for the installations which are installed for the sole benefit of the customer. However the criteria to decide whether to pay fully or party, is not clear.

c. Requesting service, changing name or address.

- Can be processed with a telephone call or by online at zero cost.

Comment: The service is provided at zero cost.

d. Meter testing

- Upon the request of the customer, the meter will be tested. The first test is free of charge. However, there can be a fee for each succeeding test conducted at the request of the customer that occurs less than 36 months after the previous test. A written explanation of the test results will be provided to the customer, and the customer has the option to be present when the test is performed. If the accuracy of the meter is found to be outside the tolerance specified in the tariff, the customer’s account will be credited promptly for any overpayments and there will be no charge for that test.

2. **Source: How to get an electricity connection, ofgem (16 April 2014)**

a. Charge for a new connection

- The customer needs to pay for the cost of the work in advance. The cost will depend on factors including where the customer is located and the amount of electricity needed.
- The price will cover: the cost of assets solely for your use; a proportion of the cost of reinforcing the network, if needed.
- The Distribution Network Operator (DNO) must calculate the cost of the work using its connection charging methodology. Each DNO publishes this on their website. ofgem approve this methodology, but it does not approve the individual charges it works out.

Comment: The consumers have to pay an amount based on the calculation of the DNO. DNO follows a methodology approved by the regulator. It seems the charge is determined through a case by case approach.

Source: SA Power Network's Connection Policy Connection Policy for 2013-2015 (May 2014) - Australia

a. Charge for a new connection

- No charge applies for the provision of a Model Standing Offer (MSO) for a basic connection service. However, a charge will apply if a connection applicant elects to negotiate the MSO's terms and conditions for the provision of a basic connection service.

e.g.: This means that a customer who requires a basic connection service which is no more than 25m from existing low voltage infrastructure (energized) will generally not have to contribute towards their connection except where that infrastructure is subject to upstream customer rebates.

- SA Power Networks may require an offer fee for negotiation and preparation of a negotiated connection offer. The fee for preparation of the offer will not exceed the amount published in our price list from time to time.

Comment: The Licensee provides a basic connection to the customers at zero cost. However if the customer needs a connection with enhanced features with respect to the basic connection he has to pay for those extra features.

Information Collected Through the Questionnaires

Information collected through the questionnaires can be put in a common format for comparison purposes. Responses taken for each service is given separately below. Further the information found from websites of electricity regulatory bodies / distribution companies also mentioned below appropriately.

Provision of a new retail supply

Country	Regulatory Agency	Description
Spain	National Markets and Competition Commission	<ul style="list-style-type: none"> The full cost of the service is charged from the customer.
Bhutan	Bhutan Electricity Authority	<ul style="list-style-type: none"> For an extension above 30 meter from existing installation, customer is charged. For an extension below 30 meter from the existing installation, Distribution Company bears the expenses.
India	Gujarat Electricity Regulatory Commission	<ul style="list-style-type: none"> A Part of the cost is charged from the customer and the rest is recovered through electricity sales.
India	Forum of Regulators	<ul style="list-style-type: none"> The full cost of the service is charged from the customer.
India	Madhya Pradesh Electricity Regulatory Commission	<ul style="list-style-type: none"> The full cost of the service is charged from the customer.
India	Tamil Nadu Electricity Regulatory Commission	<ul style="list-style-type: none"> The standard rate is charged from the consumer on per service connection basis. The short fall will be met by the licensee and will be included in capital expenditure and it will be recovered through tariff.
India	Bihar Electricity Regulatory Commission	<ul style="list-style-type: none"> The full cost of the service is charged from the customer.
America	American Electric Power, Ohio.	<ul style="list-style-type: none"> The cost is fully or partly borne by the customer. However the criteria to decide whether to pay fully or party, is not clear.
Britain	Office of Gas and Electricity Markets (ofgem)	<ul style="list-style-type: none"> The consumers have to pay an amount based on the calculation of the DNO
Australia	SA Power Network	<ul style="list-style-type: none"> The Licensee provides a basic connection to the customers at zero cost. If the customer needs a connection with enhanced features, he has to pay for those extra features.

Provision of a new Bulk supply

Country	Regulatory Agency	Description
Spain	National Markets and Competition Commission	<ul style="list-style-type: none"> • A Part of the cost is charged from the customer and the rest is borne by the distribution company.
Bhutan	Bhutan Electricity Authority	<ul style="list-style-type: none"> • For an extension above 30 meter from existing installation, customer is charged. • For an extension below 30 meter from the existing installation, Distribution Company bears the expenses.
India	Gujarat Electricity Regulatory Commission	<ul style="list-style-type: none"> • The full cost of the service is charged from the customer.
India	Forum of Regulators	<ul style="list-style-type: none"> • The full cost of the service is charged from the customer.
India	Madhya Pradesh Electricity Regulatory Commission	<ul style="list-style-type: none"> • The full cost of the service is charged from the customer.
India	Tamil Nadu Electricity Regulatory Commission	<ul style="list-style-type: none"> • The standard rate is charged from the consumer on per service connection basis. • The short fall will be met by the licensee and will be included in capital expenditure and it will be recovered through tariff. • The development in the premises of the consumer such as installation of transformer, erecting of cable, etc, will be recovered from the consumer.
India	Bihar Electricity Regulatory Commission	<ul style="list-style-type: none"> • The full cost of the service is charged from the customer.

Testing of an energy or energy/demand meter (On the consumer's request)

Country	Regulatory Agency	Description
Spain	National Markets and Competition Commission	<ul style="list-style-type: none"> The full cost of the service is charged from the customer.
Bhutan	Bhutan Electricity Authority	<ul style="list-style-type: none"> If the meter is found accurate, the testing fee is charged from the customer. If the meter is inaccurate after testing, the fee paid by the customer in advance is refunded to the customer and meter is replaced by the distribution company.
India	Gujarat Electricity Regulatory Commission	<ul style="list-style-type: none"> A Part of the cost is charged from the customer and the rest is recovered through electricity sales.
India	Forum of Regulators	<ul style="list-style-type: none"> If the meter is found accurate, the testing fee is charged from the customer. If the meter is inaccurate after testing, the fee paid by the customer in advance is refunded to the customer and meter is replaced by the distribution company.
India	Madhya Pradesh Electricity Regulatory Commission	<ul style="list-style-type: none"> The full cost of the service is charged from the customer.
India	Tamil Nadu Electricity Regulatory Commission	<ul style="list-style-type: none"> The full cost of the service is charged from the customer.
India	Bihar Electricity Regulatory Commission	<ul style="list-style-type: none"> The full cost of the service is charged from the customer.
America	American Electric Power, Ohio.	<ul style="list-style-type: none"> The first test is free of charge. However, there can be a fee for each succeeding test conducted at the request of the customer that occurs less than 36 months after the previous test.

Disconnection of the supply at the customer's request

Country	Regulatory Agency	Description
Spain	National Markets and Competition Commission	<ul style="list-style-type: none">• The cost of the service is fully borne by the Distribution Company
Bhutan	Bhutan Electricity Authority	<ul style="list-style-type: none">• The full cost of the service is charged from the customer.
India	Gujarat Electricity Regulatory Commission	<ul style="list-style-type: none">• A Part of the cost is charged from the customer and the rest is recovered through electricity sales.
India	Forum of Regulators	<ul style="list-style-type: none">• The full cost of the service is charged from the customer.
India	Madhya Pradesh Electricity Regulatory Commission	<ul style="list-style-type: none">• The full cost of the service is charged from the customer.
India	Tamil Nadu Electricity Regulatory Commission	<ul style="list-style-type: none">• The full cost of the service is charged from the customer.
India	Bihar Electricity Regulatory Commission	<ul style="list-style-type: none">• The cost of the service is fully borne by the Distribution Company

Reconnection of the supply after a disconnection at the customer's request

Country	Regulatory Agency	Description
Spain	National Markets and Competition Commission	<ul style="list-style-type: none">• The full cost of the service is charged from the customer.
Bhutan	Bhutan Electricity Authority	<ul style="list-style-type: none">• The full cost of the service is charged from the customer.
India	Gujarat Electricity Regulatory Commission	<ul style="list-style-type: none">• A Part of the cost is charged from the customer and the rest is recovered through electricity sales.
India	Forum of Regulators	<ul style="list-style-type: none">• The full cost of the service is charged from the customer.
India	Madhya Pradesh Electricity Regulatory Commission	<ul style="list-style-type: none">• The full cost of the service is charged from the customer.
India	Tamil Nadu Electricity Regulatory Commission	<ul style="list-style-type: none">• The full cost of the service is charged from the customer.
India	Bihar Electricity Regulatory Commission	<ul style="list-style-type: none">• The full cost of the service is charged from the customer.

Provision of a temporary electricity supply

Country	Regulatory Agency	Description
Spain	National Markets and Competition Commission	<ul style="list-style-type: none"> The full cost of the service is charged from the customer.
Bhutan	Bhutan Electricity Authority	<ul style="list-style-type: none"> The full cost of the service is charged from the customer.
India	Gujarat Electricity Regulatory Commission	<ul style="list-style-type: none"> The full cost of the service is charged from the customer.
India	Forum of Regulators	<ul style="list-style-type: none"> The full cost of the service is charged from the customer.
India	Madhya Pradesh Electricity Regulatory Commission	<ul style="list-style-type: none"> The full cost of the service is charged from the customer.
India	Tamil Nadu Electricity Regulatory Commission	<ul style="list-style-type: none"> The standard rate is charged from the consumer on per service connection basis. The short fall will be met by the licensee and will be included in capital expenditure and it will be recovered through tariff.
India	Bihar Electricity Regulatory Commission	<ul style="list-style-type: none"> The full cost of the service is charged from the customer.

Shifting of poles/lines/transformers/any other electrical plant

Country	Regulatory Agency	Description
Spain	National Markets and Competition Commission	<ul style="list-style-type: none"> NOT CLEAR
Bhutan	Bhutan Electricity Authority	<ul style="list-style-type: none"> If the customer desires on shifting, the expenses will be borne by customer. If it is interest of the distribution company, it will be borne by Distribution Company.
India	Gujarat Electricity Regulatory Commission	<ul style="list-style-type: none"> The full cost of the service is charged from the customer.
India	Forum of Regulators	<ul style="list-style-type: none"> The full cost of the service is charged from the customer.
India	Madhya Pradesh Electricity Regulatory Commission	<ul style="list-style-type: none"> The full cost of the service is charged from the customer.
India	Tamil Nadu Electricity Regulatory Commission	<ul style="list-style-type: none"> The full cost of the service is charged from the customer.
India	Bihar Electricity Regulatory Commission	<ul style="list-style-type: none"> The full cost of the service is charged from the customer.

Provision of a Net metering connection

Country	Regulatory Agency	Description
Spain	National Markets and Competition Commission	<ul style="list-style-type: none">• Net Metering regulation is not been enacted.
Bhutan	Bhutan Electricity Authority	<ul style="list-style-type: none">• No clauses with regard to this
India	Gujarat Electricity Regulatory Commission	<ul style="list-style-type: none">• Net metering is still not approved in the State of Gujarat.
India	Forum of Regulators	<ul style="list-style-type: none">• The full cost of the service is charged from the customer.
India	Madhya Pradesh Electricity Regulatory Commission	<ul style="list-style-type: none">• No provisions.
India	Tamil Nadu Electricity Regulatory Commission	<ul style="list-style-type: none">• The full cost of the service is charged from the customer.
India	Bihar Electricity Regulatory Commission	<ul style="list-style-type: none">• Not applicable

SUMMARY

There are total eleven sources including questionnaires and documents found in web. Given below is a summary of findings for each type of service.

1. Provision of a new retail electricity supply

Description	Number of instances
Total number of electricity regulatory bodies / distribution companies	10
Number of instances where cost is totally charged from the customer	5
Number of instances where cost is totally borne by the distribution company (Only for connections with shorter lengths)	1
Number of instances where cost is shared among the customer and the distribution company	3

- In Sri Lanka the approved methodology allows to pass through the entire cost of service to the customer.

2. Provision of a new bulk electricity supply

Description	Number of instances
Total number of electricity regulatory bodies / distribution companies	7
Number of instances where cost is totally charged from the customer	4
Number of instances where cost is totally borne by the distribution company (Only for connections with shorter lengths)	1
Number of instances where cost is shared among the customer and the distribution company	2

- In Sri Lanka the approved methodology allows to pass through the entire cost of service to the customer.

3. Testing of an energy or energy/demand meter

Description	Number of instances
Total number of electricity regulatory bodies / distribution companies	8
Number of instances where cost is totally charged from the customer	4
Number of instances where cost is totally borne by the distribution company (Only if the meter is found to be inaccurate)	2
Number of instances where cost is shared among the customer and the distribution company	1
The first test is free of charge. There can be a fee for each succeeding test conducted at the request of the customer that occurs less than 36 months after the previous test.	1

- In Sri Lanka the approved methodology allows to pass through the entire cost of service to the customer. However if the meter is found inaccurate the charged money is given back to the consumer.

4. Disconnection of the supply at the customer's request

Description	Number of instances
Total number of electricity regulatory bodies / distribution companies	7
Number of instances where cost is totally charged from the customer	4
Number of instances where cost is totally borne by the distribution company	2
Number of instances where cost is shared among the customer and the distribution company	1

- In Sri Lanka the approved methodology allows to pass through the entire cost of service to the customer.

5. Reconnection of the supply after a disconnection at the customer's request

Description	Number of instances
Total number of electricity regulatory bodies / distribution companies	7
Number of instances where cost is totally charged from the customer	6
Number of instances where cost is totally borne by the distribution company	1

- In Sri Lanka the approved methodology allows to pass through the entire cost of service to the customer.

6. Provision of a temporary electricity supply

Description	Number of instances
Total number of electricity regulatory bodies / distribution companies	7
Number of instances where cost is totally charged from the customer	6
Number of instances where cost is shared among the customer and the distribution company	1

- In Sri Lanka the approved methodology allows to pass through the entire cost of service to the customer.

7. Shifting of poles/lines/transformers/any other electrical plant

Description	Number of instances
Total number of electricity regulatory bodies / distribution companies	6
Number of instances where cost is totally charged from the customer	5
Number of instances where cost is shared among the customer and the distribution company	1

- In Sri Lanka the approved methodology allows to pass through the entire cost of service to the customer.

8. Provision of a Net metering connection

Description	Number of instances
Total number of electricity regulatory bodies / distribution companies	2
Number of instances where cost is totally charged from the customer	2

- In Sri Lanka the approved methodology allows to pass through the entire cost of service to the customer.

CONCLUSION

Considering the information received the conclusions given below can be made.

1. For all the cases considered under this survey, the practice in Sri Lanka is coherent with the majority of received international practices. Therefore there is no need of changing the agent (Consumer or Distribution Company) from whom the cost of service is recovered.

Further the methodology used in Sri Lanka, issued by PUCSL to determine the charges is very comprehensive and descriptive one compared to those issued by other regulatory bodies.

ANNEX 1

QUESTIONNAIRE on the Method of Recovering of Costs of Services Supplied by the Distribution Company

Country/Area : _____

Name of the Regulatory Agency : _____

Name of the Distribution Company/Licensee : _____

Please **underline** the suitable choice (A, B, C, D or P, Q, R, S). The descriptions are given at the end of the table.

Service provided by the Distribution Company/Licensee	Customer is charged		If "YES"	If "NO"	Any other information
	YES	NO			
1. Provision of a new retail supply (Retail supply means a normal electricity supply to a household, a small business, a shop, etc.)			A B C D	P Q R S	
2. Provision of a new Bulk supply (Bulk supply means an electricity supply where a separate transformer is dedicated to the consumer)			A B C D	P Q R S	
3. Testing of an energy or energy/demand meter			A B C D	P Q R S	
4. Disconnection of the supply at the customer's request			A B C D	P Q R S	

5. Reconnection of the supply after a disconnection at the customer's request			A B C D	P Q R S	
6. Provision of a temporary electricity supply (e.g. : Supply for a construction site)			A B C D	P Q R S	
7. Shifting of poles/lines/transformers/any other electrical plant			A B C D	P Q R S	
8. Provision of a Net metering connection			A B C D	P Q R S	

Cost of service = capital + direct labor + overheads

Descriptions of the Abbreviations given in the table

- A. The full cost of the service is charged from the customer.
- B. A Part of the cost is charged from the customer and the rest is borne by the distribution company.
- C. A Part of the cost is charged from the customer and the rest is recovered through electricity sales.
- D. Other (Please specify in the "Any other information" column).

- P. The cost of the service is fully borne by the Distribution Company
- Q. A part of the cost is borne by the Distribution Company and the rest is recovered through electricity sales.

- R. The full cost is recovered through electricity sales.
- S. Other (Please specify in the “Any other information” column).

ANNEX 2 - 1

Country/Area : Spain (Uniform retribution in for the territory)

Name of the Regulatory Agency : National Markets and Competition Commission (CNMC)

Name of the Distribution Company/Licensee : Endesa, Iberdrola, HC Energía – EDP, Unión Fenosa, EON and other small distribution companies.

*Distribution companies receive regulated income; retail activity is unbundled from distribution therefore no costs are recovered through electricity sales.

Please **underline** the suitable choice (A, B, C, D or P, Q, R, S). The descriptions are given at the end of the table.

Service provided by the Distribution Company/Licensee	Customer is charged		If “YES”	If “NO”	Any other information
	YES	NO			
1. Provision of a new retail supply (Retail supply means a normal electricity supply to a household, a small business, a shop, etc.)	X		<u>A</u> B C D	P Q R S	
2. Provision of a new Bulk supply (Bulk supply means an electricity supply where a separate transformer is dedicated to the consumer)	X		A <u>B</u> C D	P Q R S	
3. Testing of an energy or energy/demand meter	X		<u>A</u> B C D	P Q R S	
4. Disconnection of the supply at the customer's request		X	A B C D	<u>P</u> Q R S	

5. Reconnection of the supply after a disconnection at the customer's request	X		<u>A</u> B C D	P Q R S	
6. Provision of a temporary electricity supply (e.g. : Supply for a construction site)	X		<u>A</u> B C D	P Q R S	Constructors can build themselves the installations. In case those installations are to be used as part of the definitive system the value can be deducted from future payments.
7. Shifting of poles/lines/transformers/any other electrical plant		X	A B C D	<u>P</u> Q R S	Costs should be included in the expansion plans.
8. Provision of a Net metering connection	X		<u>A</u> B C D	P Q R S	Net Metering regulation is not been enacted.

ANNEX 2 – 2

Country/Area : Bhutan

Name of the Regulatory Agency : Bhutan Electricity Authority

Name of the Distribution Company /Licensee : Bhutan Power Corporation

Please **underline** the suitable choice (A, B, C, D or P, Q, R, S). The descriptions are given at the end of the table.

Service provided by the Distribution Company/Licensee	Customer is charged		If “YES”	If “NO”	Any other information
	YES	NO			
1. Provision of a new retail supply (Retail supply means a normal electricity supply to a household, a small business, a shop, etc.)	✓ (A)	✓ (P)	A B C D	P Q R S	Yes (A): for any extension above 30 meter from existing installation, customer is charged. No (P): for any extension less than 30 meter from the existing installation, distribution company borne the expenses.
2. Provision of a new Bulk supply (Bulk supply means an electricity supply where a separate transformer is dedicated to the customer)	✓ (A)	✓ (P)	A B C D	P Q R S	Same as above
3. Testing of an energy or energy/demand meter	✓ (A)	✓ (P)	A B C D	P Q R S	Yes (A): if the meter is found accurate, the testing fee is charged to the customer. No (P): if the meter is inaccurate after testing, the fee paid by the customer in advance is refunded to the customer and meter is replaced by the distribution company.
4. Disconnection of the supply at the customer’s request	✓ (A)		A B C	P Q R	

			D	S	
5. Reconnection of the supply after a disconnection at the customer's request	✓ (A)		A B C D	P Q R S	
6. Provision of a temporary electricity supply (e.g. supply for a construction site)	✓ (A)		A B C D	P Q R S	
7. Shifting of poles/lines/transformers/ any other electrical plant	✓ (A)	✓ (P)	A B C D	P Q R S	Yes (A): if the customer desires on shifting, the expenses will be borne by customer. No (P): if it is interest of the distribution company, it will be borne by distribution company.
8. Provision of a Net metering connection			A B C D	P Q R S	No clauses with regard to this.

ANNEX 2 - 3

Country/Area

: India

Name of the Regulatory Agency

: Gujarat Electricity Regulatory Commission

Name of the Distribution Company/Licensee : Dakshin Gujarat Vij Company Limited (DGVCL), Madhya Gujarat Vij Company Limited (MGVCL), Paschim Gujarat Vij Company Limited (PGVCL), Uttar Gujarat Vij Company Limited (UGVCL), Torrent Power Limited – Ahmedabad, Torrent Power Limited - Surat, Torrent Energy Limited, Kandla Port Trust, ASPEN Infrastructures Limited, MPSEZ Utilities Pvt. Ltd.

Please underline the suitable choice (A, B, C, D or P, Q, R, S). The descriptions are given at the end of the table.

Service provided by the Distribution Company/Licensee	Customer is charged		If “YES”	If “NO”	Any other information
	YES	NO			
1. Provision of a new retail supply (Retail supply means a normal electricity supply to a household, a small business, a shop, etc.)	√		A B <u>C</u> D	P Q R S	
2. Provision of a new Bulk supply (Bulk supply means an electricity supply where a separate transformer is dedicated to the consumer)	√		<u>A</u> B C D	P Q R S	
3. Testing of an energy or energy/demand meter	√		A B <u>C</u> D	P Q R S	Meter testing charges are specified in the Regulations.
4. Disconnection of the supply at the customer's request	√		A B <u>C</u> D	P Q R S	

5. Reconnection of the supply after a disconnection at the customer's request	√		A B <u>C</u> D	P Q R S	
6. Provision of a temporary electricity supply (e.g. : Supply for a construction site)	√		<u>A</u> B C D	P Q R S	
7. Shifting of poles/lines/transformers/any other electrical plant	√		<u>A</u> B C D	P Q R S	For shifting of service connection in same premises service connection charges as approved by the Commission is being levied.
8. Provision of a Net metering connection			A B C D	P Q R S	Net metering is still not approved in the State of Gujarat.

ANNEX 2 – 4

Country/Area : INDIA

Name of the Regulatory Agency : Forum of Regulators

Name of the Distribution Company/Licensee : Model Supply Code for Distribution Licensees in India

Please **underline** the suitable choice (A, B, C, D or P, Q, R, S). The descriptions are given at the end of the table.

Service provided by the Distribution Company/Licensee	Customer is charged		If “YES”	If “NO”	Any other information
	YES	NO			
1. Provision of a new retail supply (Retail supply means a normal electricity supply to a household, a small business, a shop, etc.)	Yes		<u>A</u> B C D	P Q R S	<ul style="list-style-type: none"> Load for energy intensive consumers such as arc /induction furnaces, rolling mills, re-rolling mills and mini steel plants shall be released only through an independent feeder wherever feasible and all necessary charges shall be paid by the consumer. Supply may be given at independent feeder in other cases at the request of the consumer if he is willing to bear all applicable charges. In case of new connection, the consumer shall bear Service Connection Charges, i.e. the cost of extension of service connection from the distribution mains to the point of supply, and shall pay the security deposit (except in case of prepaid meters)
2. Provision of a new Bulk supply (Bulk supply means an electricity supply where a separate transformer is dedicated to the consumer)	Yes		<u>A</u> B C D	P Q R S	<ul style="list-style-type: none"> The licensee shall reconnect the consumer’s installation within 2 days of payment of past dues, reconnection charges and Service Line Charges, as applicable, for that category of consumer, after getting necessary formalities completed from the consumer.
3. Testing of an energy or energy/demand meter (yes on Consumer Request)		No	A B C	<u>P</u> Q R	<ul style="list-style-type: none"> It shall be the licensee’s responsibility to satisfy itself regarding the accuracy of the meter before it is installed and the licensee may test them for this

			D	S	<p>purpose. The licensee shall conduct periodical inspection/testing and calibration of the meters as specified by the Central Electricity Authority (Installation & Operation of Meters) Regulations, 2006.</p> <ul style="list-style-type: none"> • Only In case of testing on the consumer's request, the consumer shall have to pay the testing fee as per the cost guidelines of the Cost Book • Provided further that if the meter is found to be defective / burnt due to technical reasons attributable to the licensee viz. voltage fluctuation, transients etc., the licensee shall refund the test fee to the consumer by adjustment in the subsequent bill.
4. Disconnection of the supply at the customer's request	Yes		<u>A</u> B C D	P Q R S	<ul style="list-style-type: none"> • The licensee shall carry out a special reading and prepare a final bill including all arrears up to the date of such billing within 5 days from receipt of the request. Upon payment, the licensee shall issue a receipt with 'Final Bill' stamped on it. • HT/EHT consumers shall also bear the estimated expenditure on removal of the apparatus and service line.
5. Reconnection of the supply after a disconnection at the customer's request	Yes		<u>A</u> B C D	P Q R S	<ul style="list-style-type: none"> • The licensee shall reconnect the consumer's installation within 2 days of payment of past dues, reconnection charges and Service Line Charges, as applicable, for that category of consumer, after getting necessary formalities completed from the consumer.
6. Provision of a temporary electricity supply (e.g. : Supply for a construction site)	Yes		<u>A</u> B C D	P Q R S	<ul style="list-style-type: none"> • After deposit of estimated cost and advance charges for temporary electricity connection by the applicant, and satisfactory testing of the consumer installation, the temporary connection shall be released by the date of requirement as indicated in the application form, or as per the timelines given below, whichever is later.

7. Shifting of poles/lines/transformers/any other electrical plant	Yes		<u>A</u> B C D	P Q R S	<ul style="list-style-type: none"> The applicant shall apply for shifting the service connection in existing premises or for deviation of existing lines in the format prescribed in Annexure 11.6 to this Code. The licensee shall process the application form in accordance with clauses 4.68 - 4.71 of this Code. For site inspection and issuance & payment of demand note for the estimated cost of works, both the licensee and applicant shall follow the procedure and timelines as laid down in clauses 4.29 - 4.40 of this Code. The following time schedule shall be observed for completing the works from the date of payment of charges: <ol style="list-style-type: none"> (1) Shifting of meter/service line: 7 days (2) Shifting of LT/HT lines: 20 days (3) Shifting of transformer: 30 days Any excess/deficient payment made by the consumer shall be adjusted in the subsequent two bills.
8. Provision of a Net metering connection		No	A B C D	<u>P</u> Q R S	<ul style="list-style-type: none"> The appropriate meter(s) at the premises of the consumer shall be procured, installed and maintained by the Distribution Licensee at the cost of the eligible consumer. However if the eligible consumer wishes to procure the appropriate Meter(s), he may procure such meter(s) and present the same to the Distribution Licensee for testing and installation.

Source: FOR Model Supply Code and Final_UPERC RSPV Regulations 2015.

ANNEX 2 – 5

Country/Area : ____ India ____

Name of the Regulatory Agency : ____ Madhya Pradesh Electricity Regulatory Commission ____

Name of the Distribution Company/Licensee : ____ Madhya Pradesh Madhya Kshetra Vidyut Vitaran Ltd. ____

Please **underline** the suitable choice (A, B, C, D or P, Q, R, S). The descriptions are given at the end of the table.

Service provided by the Distribution Company/Licensee	Customer is charged		If “YES”	If “NO”	Any other information
	YES	NO			
1. Provision of a new retail supply (Retail supply means a normal electricity supply to a household, a small business, a shop, etc.)	B		A B C D	P Q R S	Distribution transformer cost is borne by Distribution licensee.
2. Provision of a new Bulk supply (Bulk supply means an electricity supply where a separate transformer is dedicated to the consumer)	A		A B C D	P Q R S	Estimation prepared & Customer has to pay all Estimation.
3. Testing of an energy or energy/demand meter	A		A B C D	P Q R S	At consumer Request.
4. Disconnection of the supply at the customer's request	A		A B C D	P Q R S	

5. Reconnection of the supply after a disconnection at the customer's request	A		A B C D	P Q R S	
6. Provision of a temporary electricity supply (e.g. : Supply for a construction site)	A		A B C D	P Q R S	
7. Shifting of poles/lines/transformers/any other electrical plant	A		A B C D	P Q R S	
8. Provision of a Net metering connection		S	A B C D	P Q R S	There is no such provision for net metering in this Discom. It will be rolled out soon.

ANNEX 2 – 6

Country/Area : India

Name of the Regulatory Agency : MPERC

Name of the Distribution Company/Licensee : MPPKVVCL, Jabalpur

Please **underline** the suitable choice (A, B, C, D or P, Q, R, S). The descriptions are given at the end of the table.

Service provided by the Distribution Company/Licensee	Customer is charged		If “YES”	If “NO”	Any other information
	YES	NO			
1. Provision of a new retail supply (Retail supply means a normal electricity supply to a household, a small business, a shop, etc.)	A		A B C D	P Q R S	
2. Provision of a new Bulk supply (Bulk supply means an electricity supply where a separate transformer is dedicated to the consumer)	A		A B C D	P Q R S	
3. Testing of an energy or energy/demand meter	A		A B C D	P Q R S	During testing, if meter is found working condition, then full cost is to be paid by the consumer. In case, the meter is found to be defective, then the cost is borne by the licensee
4. Disconnection of the supply at the customer's request	A		A B C D	P Q R S	

5. Reconnection of the supply after a disconnection at the customer's request	A		A B C D	P Q R S	
6. Provision of a temporary electricity supply (e.g. : Supply for a construction site)	A		A B C D	P Q R S	
7. Shifting of poles/lines/transformers/any other electrical plant	A		A B C D	P Q R S	
8. Provision of a Net metering connection	A		A B C D	P Q R S	

ANNEX 2 – 7

Country/Area : India/MP

Name of the Regulatory Agency : MPERC

Name of the Distribution Company/Licensee : MPPKVCL, Indore

Please **underline** the suitable choice (A, B, C, D or P, Q, R, S). The descriptions are given at the end of the table.

Service provided by the Distribution Company/Licensee	Customer is charged		If “YES”	If “NO”	Any other information
	YES	NO			
1. Provision of a new retail supply (Retail supply means a normal electricity supply to a household, a small business, a shop, etc.)	Yes		<u>A</u> B C D	P Q R S	
2. Provision of a new Bulk supply (Bulk supply means an electricity supply where a separate transformer is dedicated to the consumer)	Yes		<u>A</u> B C D	P Q R S	
3. Testing of an energy or energy/demand meter	Yes		A <u>B</u> C D	P Q R S	
4. Disconnection of the supply at the customer's request		No	A B C D	<u>P</u> Q R S	

5. Reconnection of the supply after a disconnection at the customer's request	Yes		A <u>B</u> C D	P Q R S	
6. Provision of a temporary electricity supply (e.g. : Supply for a construction site)	Yes		A <u>B</u> C D	P Q R S	
7. Shifting of poles/lines/transformers/any other electrical plant	Yes		A <u>B</u> C D	P Q R S	
8. Provision of a Net metering connection	Yes		<u>A</u> B C D	P Q R S	

ANNEX 2 – 8

Country/Area

: Tamil Nadu, India

Name of the Regulatory Agency

: Tamil Nadu Electricity Regulatory Commission (TNERC)

Name of the Distribution Company/Licensee

: Tamil Nadu Generation and Distribution Corporation Ltd (TANGEDCO)

Please **underline** the suitable choice (A, B, C, D or P, Q, R, S). The descriptions are given at the end of the table.

Service provided by the Distribution Company/Licensee	Customer is charged		If “YES”	If “NO”	Any other information
	YES	NO			
1. Provision of a new retail supply (Retail supply means a normal electricity supply to a household, a small business, a shop, etc.)	B		A B C D	P Q R S	The standard rate is being collected from the consumer on per service connection basis. The excess / short fall will be met by the licensee and will be included in capital expenditure and it will be recovered through tariff. The rate was approved by the TNERC.
2. Provision of a new Bulk supply (Bulk supply means an electricity supply where a separate transformer is dedicated to the consumer)	B		A B C D	P Q R S	The standard rate is being collected from the consumer on per KVA as development charges. The excess / short fall will be met by the licensee and will be included in capital expenditure and it will be recovered through tariff. The rate was approved by the TNERC. The development in the premises of the consumer such as installation of transformer, erection of cable, etc, will be recovered from the consumer.
3. Testing of an energy or energy/demand meter	A	P	A B C D	P Q R S	This is option of the consumer. If entire cost is recovered from the consumer, the meter rent will not be recovered from the consumer. If cost is not recovered, the consumer has to pay monthly meter rent to TANGEDCO. In practice, the meter is being provided by TANGEDCO on collection of monthly meter rent.

4. Disconnection of the supply at the customer's request	A		A B C D	P Q R S	
5. Reconnection of the supply after a disconnection at the customer's request	A		A B C D	P Q R S	
6. Provision of a temporary electricity supply (e.g. : Supply for a construction site)	B		A B C D	P Q R S	Same as to question No.1
7. Shifting of poles/lines/transformers/any other electrical plant	A		A B C D	P Q R S	Cost will be recovered from the consumer based on the estimate prepared by TANGEDCO
8. Provision of a Net metering connection	A	P	A B C D	P Q R S	Same as to question No.3

ANNEX 2 – 9

Country/Area

: India

Name of the Regulatory Agency

: Bihar Electricity Regulatory Commission (BERC)

Name of the Distribution Company/Licensee

: South Bihar Power Distribution Co. Ltd. (SBPDCL) & North Bihar Power Distribution Co. Ltd. (NBPDCCL)

Please **underline** the suitable choice (A, B, C, D or P, Q, R, S). The descriptions are given at the end of the table.

Service provided by the Distribution Company/Licensee	Customer is charged		If “YES”	If “NO”	Any other information
	YES	NO			
1. Provision of a new retail supply (Retail supply means a normal electricity supply to a household, a small business, a shop, etc.)	Yes		A✓ B C D	P Q R S	Consumer shall bear the service connection charges i.e. cost of service connection from the distribution mains to the point of supply.
2. Provision of a new Bulk supply (Bulk supply means an electricity supply where a separate transformer is dedicated to the consumer)	Yes		A✓ B C D	P Q R S	In this case cost of transformer is borne by the consumer. Also the consumer has to provide the space for the transformer, sub-station switchgears, meters and panels for which no rent/premium is to be paid by distribution company.
3. Testing of an energy or energy/demand meter	Yes		A✓ B C D	P Q R S	If meter is tested on consumer's request, testing fee is charged to consumer.
4. Disconnection of the supply at the customer's request		No	A B C D	P✓ Q R S	

5. Reconnection of the supply after a disconnection at the customer's request	Yes		A✓ B C D	P Q R S	
6. Provision of a temporary electricity supply (e.g. : Supply for a construction site)	Yes		A✓ B C D	P Q R S	
7. Shifting of poles/lines/transformers/any other electrical plant	Yes		A✓ B C D	P Q R S	
8. Provision of a Net metering connection		No	A B C D	P Q R S	Not applicable.